

40 said existing viewers; and determining whether or not a capacity of said system is sufficient to support at least one additional viewer based at least in part on said balancing of said I/O capacity with said buffer memory space; and

45 5 wherein said managing further comprises determining said read-ahead size by monitoring the number of existing viewers served from said at least one storage device or partitioned group of storage devices, and monitoring the data consumption rate of said existing viewers; balancing said I/O capacity with said buffer memory space based at least in part on said monitored number of existing viewers and said monitored data consumption rates of said existing viewers; setting a cycle time based at least in part on said balancing of said I/O capacity with said buffer memory space; and determining a number of read ahead data blocks based at least in part on said cycle time, said monitored data consumption rate, and a size of said data blocks.

45 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175 180 185 190 195 200 205 210 215 220 225 230 235 240 245 250 255 260 265 270 275 280 285 290 295 300 305 310 315 320 325 330 335 340 345 350 355 360 365 370 375 380 385 390 395 400 405 410 415 420 425 430 435 440 445 450 455 460 465 470 475 480 485 490 495 500 505 510 515 520 525 530 535 540 545 550 555 560 565 570 575 580 585 590 595 600 605 610 615 620 625 630 635 640 645 650 655 660 665 670 675 680 685 690 695 700 705 710 715 720 725 730 735 740 745 750 755 760 765 770 775 780 785 790 795 800 805 810 815 820 825 830 835 840 845 850 855 860 865 870 875 880 885 890 895 900 81. The method of claim 71, wherein individual storage devices of said at least two storage devices or partitioned groups of storage devices comprise storage disk drives; and wherein said at least one of said monitored I/O system performance characteristics comprise at least one of seek and rotation latency, estimated transfer rate, or a combination thereof.

82. The method of claim 65, wherein said method further comprises validating an estimated value of at least one of said system I/O performance characteristics by comparing a monitored value of at least one system I/O performance characteristic to the estimated value of said at least one system I/O performance characteristic.

83. The method of claim 82, wherein said method further comprises reporting an alarm based 30 at least in part on said comparison of the monitored value of said at least one system I/O

performance characteristic to the estimated value of said at least one system I/O performance characteristic.

5 84. A method of monitoring I/O resource utilization in an information delivery environment, comprising monitoring said I/O resource utilization at the logical volume level.

10 85. The method of claim 84, wherein said information delivery environment comprises delivery of continuous media data to a plurality of viewers from an information management system comprising a storage system, said storage system including said I/O resources and having at least one storage device or at least one partitioned group of storage devices.

15 86. The method of claim 85, wherein said monitoring of said I/O resource utilization comprises monitoring a workload of said at least one storage device or at least one partitioned group of storage devices at the logical volume level.

→

20 87. The method of claim 85, wherein said monitoring of said I/O resource utilization comprises monitoring system I/O performance characteristics of said at least one storage device or at least one partitioned group of storage devices at the logical volume level.

25 88. The method of claim 85, wherein said monitoring of said I/O resource utilization comprises constantly monitoring a workload of said at least one storage device or at least one partitioned group of storage devices at the logical volume level during run-time of said storage system; and wherein said method further comprises deciding to accept or reject at least one new I/O request based at least in part on said monitored workload.

89. The method of claim 85, wherein said method comprises monitoring at least one of maximal aggregate consumption rate for said at least one storage device or partitioned group of storage devices, maximal aggregate number of viewers for said at least one storage device or partitioned group of storage devices, or a combination thereof.

5

90. The method of claim 84, wherein said information delivery environment comprises delivery of continuous media data to a plurality of viewers from an information management system comprising a storage system, said storage system including said I/O resources and having at least two storage devices or at least two partitioned groups of storage devices.

10

91. The method of claim 90, wherein said information management system comprises a content delivery system coupled to a network; and wherein said continuous media data is delivered from said content delivery system to said plurality of viewers across said network.

15

92. The method of claim 91, wherein said content delivery system comprises an endpoint content delivery system coupled to said network at an endpoint of said network.

20

93. The method of claim 91, further comprising monitoring a workload distribution across said at least two storage devices or at least two partitioned groups of storage devices.

25

94. The method of claim 93, wherein said workload distribution is monitored by monitoring at least one of maximal aggregate consumption rate for each of said at least two storage devices or partitioned groups of storage devices, maximal aggregate number of viewers for each of said at least two storage devices or partitioned groups of storage devices, or a combination thereof.

30